Strangulated lumbar hernias in adults: A case report and review of the literature

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ABSTRACT

Strangulated lumbar hernia is a very rare condition, with no more than 30 cases reported in the literature so far. Therefore, there is no specific management guideline and the diagnosis remains difficult. By reporting the case of a Senegalese male patient who had a preoperative diagnosis of strangulated lumbar hernia, we aim to discuss the diagnosis and therapeutic modalities of this rare entity, which is often misdiagnosed.

KEYWORDS

Abdominal lumbar hernia – Intestinal obstruction – Laparoscopy – Laparotomy

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Lumbar hernia is an uncommon condition. Barbet, in 1672, made the first description of this entity, while Garangeot published the first case in 1731.¹ Strangulation is a life-threatening complication that is often misdiagnosed due to its rarity and unspecific display. Indeed, to the best of our knowledge, no more than 30 cases of strangulated lumbar hernia have been reported in the surgical literature since 1889.² Therefore, there is no specific management guideline.³ Here we report the case of a strangulated lumbar hernia in a Senegalese male, and discuss the diagnosis and therapeutic modalities of this rare entity.

Case presentation

A 70-year-old male patient presented to the emergency department with a painful swelling in the right lumbar region. He also complained of vomiting related to food intake and abdominal pain for 3 days, without weight loss and fever. Moreover, he revealed changes in his bowel habits, with abolition of stools for 2 days. Physical examination revealed a painful and irreducible mass of about 6 cm in diameter located in the right lumbar region. There was also localised tenderness. Laboratory tests did not reveal any abnormality, aside from a white blood cell count that was mildly increased, at 12,000 cells/mm³. Computed tomography (CT) was suggestive of strangulated right lumbar hernia containing a bowel loop without signs of complication (Figure 1).

After a brief resuscitation, the patient was taken to the surgical theatre in a left lateral decubitus position and under general anesthesia. Surgical exploration of the mass through a lumbar incision revealed an ischemic small bowel loop of

around 5 cm in size surrounded by a hernia sac that was confined within the right lumbar triangle of Jean Louis Petit (Figure 2). After a reduction of the hernia and a resection of the sac, the defect was repaired using an interrupted X-suture with a USP size 3 non-resorbable suture.

The postoperative course was uneventful. The patient was discharged home on the fourth day after surgery. No recurrence was observed at 3-year follow-up.

Discussion

Lumbar hernia is a well-recognized clinical condition that is rarely encountered,^{1,4,5} with only around 300 cases reported in the literature.^{1,4} Strangulated primary lumbar hernia is even rarer, occurring in about 9% of cases, with no more than 30 cases reported so far.² It is also reported to be mostly associated with other abdominal wall hernias in elderly patients.² In our patient, examination of other hernia areas was quite normal.

The clinical presentation of strangulated lumbar hernia can be related to a bowel obstruction, as in our case, or a urinary obstruction with hydronephrosis.¹ More rarely, lumbar hernia may be revealed by an acute back pain, mimicking sciatica.¹ In the majority of cases, the diagnosis is delayed and made in a context of bowel obstruction, as in our case.² X rays offer a poor contribution in the diagnosis by revealing non-specific air-fluid levels, in case of obstruction.² Other abdominal imaging, such as CT scanning, magnetic resonance imaging or ultrasonography, can reliably make the diagnosis of lumbar hernia.² However, a rigorous physical examination remains the cornerstone of the diagnosis, as it was in our patient.

Figure 1 Computed tomography showing the strangulated right lumbar hernia

Figure 2 Intraoperative view of the strangulated bowel loop

Many surgical techniques, including primary suture of the orifice, are available. There are techniques that involve the surrounding muscles and fascia lata to cover the defect, but they have the disadvantage of high tension and an increased recurrence rate.¹ In contrast, tension-free techniques use an artificial mesh to cover the defect, as in the Dwyer-Ponka technique.¹ Laparoscopic techniques, via either transabdominal or extraperitoneal approaches, have been demonstrated to be feasible.⁴ Moreno et al, in a prospective study of lumbar hernia repairs, showed that the laparoscopic approach has significantly a lower morbidity rate, a shorter length of hospital stay and reduced analgesic requirement.⁴ In strangulated hernias, it has been demonstrated that using a synthetic mesh leads to complications, such as infection or bowel obstruction. However, its use remains controversial.¹ Indeed, some authors recommend synthetic mesh repair if the intestinal resection is carried out with sufficient care to minimise infectious complications.⁵ Biosynthetic meshes can be an alternative in cases with a high risk of infection.¹ In our patient, we performed a lumbar approach as there was no sign of necrosis or peritonitis. Furthermore, we could not attempt a laparoscopy due to a lack of experience. The lumbar approach is indicated in early diagnosis without complication.⁶ In cases of suspected bowel necrosis or peritonitis, an emergency laparotomy should be advocated to have the best exposure for the necrotic bowel resection and a flushing of the abdominal cavity, if necessary.²

Conclusions

Strangulated lumbar hernia is a very rare condition, the diagnosis of which is often delayed. Physical examination remains the cornerstone of the diagnosis, and CT scan plays a key role in the diagnosis and planning surgical management. Many surgical techniques, including primary suture and mesh repair either by laparoscopy or laparotomy, are available. A lumbar approach is feasible in the absence of complications. The prognosis depends on the delay of presentation.

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